

Claims:

1. A mount apparatus for mounting a measurement device on a rail car above a track surface of a railroad track, the rail car having an unsprung component and a sprung component, said mount apparatus comprising:

a securement member adapted to be secured to the unsprung component of the rail car;

a pivot arm pivotably connected to said securement member, said pivot arm including a lever arm extending therefrom; and

a swing arm connecting said lever arm of said pivot arm to the sprung component of the rail car, said swing arm being adapted to rotate said pivot arm so that a distal end of said pivot arm is maintained at a substantially fixed height distance above the track surface.

2. The mount apparatus of claim 1, wherein said securement member is a cradle member adapted to be secured to an axle bearing housing of a rail car truck.

3. The mount apparatus of claim 2, wherein said cradle member includes a semi-circular axle bearing housing portion.

4. The mount apparatus of claim 1, wherein one end of said pivot arm is pivotably connected to said securement member by a bearing.

5. The mount apparatus of claim 4, wherein said distal end of said pivot arm is provided with a cross bar mount.

6. The mount apparatus of claim 5, further comprising a cross bar laterally extending above said track surface, said cross bar being mounted to said cross bar mount.

7. The mount apparatus of claim 1, wherein said lever arm of said pivot arm is an extension flange.

8. The mount apparatus of claim 1, wherein said swing arm is connected to a truck frame.

9. The mount apparatus of claim 1, wherein length dimension of said swing arm is adjustable.

10. The mount apparatus of claim 9, wherein said swing arm includes a threaded stud member and one reverse threaded end.

11. The mount apparatus of claim 1, wherein said measurement device is an electronic sensor.

12. A mount apparatus for mounting a measurement device on a rail car above a track surface of a railroad track, the rail car having an unsprung component and a sprung component, said mount apparatus comprising:

- a securement member adapted to be secured to the unsprung component of the rail car;

- a pivot arm pivotably connected to said securement member, said pivot arm including a lever arm extending therefrom; and

- a swing arm connecting said lever arm of said pivot arm to the sprung component of the rail car to rotate said pivot arm in a manner to move a distal

end of said pivot arm a vertical distance that offsets a vertical distance moved by said sprung component relative to the unsprung component.

13. The mount apparatus of claim 12, wherein said securement member is a cradle member with a semi-circular axle bearing housing portion adapted to be secured to an axle bearing housing of a rail car truck.

14. The mount apparatus of claim 12, wherein one end of said pivot arm is pivotably connected to said securement member by a bearing.

15. The mount apparatus of claim 12, further comprising a cross bar laterally extending above said track surface, said cross bar being mounted at a distal end of said pivot arm.

16. The mount apparatus of claim 12, wherein said lever arm of said pivot arm is an extension flange, and said swing arm is connected to a truck frame and said extension flange.

17. A method for mounting a measurement device on a rail car, the rail car having an unsprung component and a sprung component, said method comprising the steps of:

securing said measurement device above a track surface of a railroad track; and

moving the position of said measurement device in response to movement of the sprung component relative to the unsprung component, thereby maintaining position of said measurement device at a substantially the same fixed height distance above the track surface.

18. The method of claim 17, further including the step of securing said measurement device to a mounting apparatus and moving the position of said mounting apparatus in response to movement of the sprung component relative to the track surface, thereby moving the position of said measurement device.

19. The method of claim 18, wherein said mounting apparatus includes a securement member, a pivot arm with a lever arm extending therefrom, and a swing arm.

20. The method of claim 19, further including the steps of:  
securing said securement member to the unsprung component of the rail car;  
connecting said pivot arm to said securement member; and  
connecting said swing arm to said lever arm of said pivot arm and to the sprung component of the rail car, so that said pivot arm is rotated to move a distal end of said pivot arm a vertical distance that offsets a vertical distance moved by said sprung component relative to the track surface.

21. The method of claim 19, further including the step of adjusting the position of a distal end of said pivot arm based on an output of said measurement device.